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THE OUTLOOK IN DIABETIC CHILDREN*

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The purpose of this paper is not to attempt a prognosis of diabetes occurring in children, but rather to discuss some phases of the influence of the disease on the individual who has not yet reached adult life.

Certainly since the advent of insulin the diabetic child has a road to travel far diverged from a similar sufferer of ten years ago. Then, from the figures of Von Noordan, the average length of life of a diabetic in the first decade was two years, and boys or girls in their 'teens had an average expectancy of but four years. That the time limit has been materially extended is even now realized. Diabetes has made less inroads into the vitality and development of the vast majority of afflicted children in the past three years than in any such period before. The future should hold the same outlook for new cases. Can careful dietary, proper hygiene and insulin continue to do as much in the next three years as it has so far in treated cases?

One cannot but realize that Banting did more than just give a substance which would oxidize carbohydrates when he gave the world insulin. It is a life buoy to diabetic children, but the rope that pulls the endangered struggler to shore is the physician's knowledge of dietary indications. Since the use of the drug is so importantly imposed upon food values, there can be little doubt but that the diabetic child of today is getting a far more normal and natural diet than ever before. His protein intake is and must be as carefully estimated as the carbohydrate and fat. Hence body development and growth can and does well approach that of the normal and healthy child. So that insulin has caused, as well as allowed, a diet carefully planned to meet the needs of each individual case. It has stressed the necessity of an accurately measured diet and thus has broadcast dietary knowledge. Many diabetics can be controlled by diet and no insulin; no one would treat a case with insulin and no dietary measures.

There are many factors which might influence the outlook of diabetes in a child. Usually, a more severe form of the disease is seen in younger people and its control may tax one to the limit.

Heredity is said to have a bearing. In many cases there is no positive family history, but when such exists there is a tendency, as quoted by Mosenthal, for the disease to develop at an earlier age in each successive generation. In this connection, it is interesting and informing to note that Joslin considers heredity a favorable occurrence because in his experience these cases are not infrequently mild, and he further considers that the younger the child when the disease manifests itself, the better the outlook.

Obesity or overweight in children probably plays less part as a causative factor of diabetes than in adults, but it would be advantageous to the future welfare of a diabetic child to so arrange a diet which would allow normal growth, strength and activities, and yet keep it well within the average weight for its age, sex and height.

Infections play an important role in the course of a diabetic life; and this, aside from the skin infections and carbuncles which may occur as complications. Concurring infectious diseases, severe colds, tonsilitis, or relatively minor infections, such as abscessed teeth, may markedly lower the patient's tolerance after a satisfactory balance between diet and insulin has been long established. Such a lowered tolerance may persist. All children should of course be guarded against infections, but especially so the diabetic child.

What influence the catamenia may have is questionable. It is not believed that the disease diabetes per se would influence the onset or regularity of the menstrual cycle as long as undernutrition was not allowed to exist. The writer has had one case under observation for the past three years who is now thirteen years of age and who is rapidly showing the body developments of puberty. This girl contracted mumps about one year ago and has never regained her lost tolerance, but on the contrary is with difficulty

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kept within normal blood sugar limits. An experience with another case of a woman aged thirty-eight, who with regularity has a complete loss of tolerance for a week prior to the onset of each mensis and who invariably regains her tolerance the day the flow begins, has led to thoughts that perhaps the developing girl referred to will gain back some of her tolerance with the ushering in of her menstrual functions. Pituitary and suprarenal gland activities diminish glucose tolerance as well as does thyroid over-activity. Does the known relation between thyroid and ovarian endocrines play a part in the disturbances mentioned? Pregnancy might be discussed at this time, for these growing girls in their 'teens may well be hoped to successfully check the progressiveness of diabetes and live to consider wifehood and motherhood. The latter is generally considered to be contra-indicated, though the writer had the pleasure of seeing a happy mother and her eight- or nine-year-old lusty lad when visiting Joslin's Clinic last year. This mother had had diabetes for some years prior to the birth of her child.

One of the most common complications of diabetes is arteriosclerosis. This statement does not refer to children, of course, but if they should live to the fourth decade we may see more arteriosclerotic complications than we see today. Certainly we should guard against such development. It may be that years of careful dieting will prevent such changes, though at best a diabetic diet must vary from the accepted normal body needs. Prevention of those things which make a patient susceptible to gangrene should be instilled in the minds of our youthful diabetics. And as time goes on we shall perhaps immortalize Joslin's statement that "individuals over fifty years of age must learn to keep their feet as clean as their faces."

It is not felt that case reports would be of any especial interest at this time. There have been observed and treated seven patients under twenty-one years of age in the past three years. Their ages were, when first seen, four, eight, ten, thirteen, fifteen, sixteen and eighteen years, respectively. All cases have shown satisfactory growth and development and all have presented difficult problems from time to time. The case least controlled at present is the girl referred to earlier, though her general appearance would indicate in no manner that she was other than a normal, healthy school girl, and her activities in work and play parallel her brothers and sisters. None of the cases give a history of heredity, though the two patients, aged 15 and 16, respectively, are sisters.

In concluding, one must say that at least the outlook in the diabetic child of today is far more cheerful than ever before.

DISCUSSION

Dr. W. C. Thomas, Gainesville, Fla.:

When I get a case of diabetes I generally send it to Dr. Limbaugh or Dr. Harris in Jacksonville. But we all meet with cases of diabetes and we cannot always send them away.

I am not as interested in diabetes as Dr. Limbaugh. We were internes together and I remember how he used to follow the doctors around the wards in the hospital, and run diets, etc. That was before very much was accomplished with diabetes and what had been accomplished was due to following Allen's leadership. Now, since we have insulin, we have a really valuable vehicle.

Joslin, in reporting something over three hundred cases of diabetes, states that of something over 150 cases in a three-year period before insulin came in, twelve were living at the end of two and one-half years, and of one hundred sixty cases under treatment since insulin came in, one hundred and fifty are living. When you stop and think about it, it is really a remarkable change.

As Dr. Limbaugh said, insulin cannot be used without diet. We cannot diet a child like we can an adult. We have to give the child enough nourishment. When you figure out the actual proportion of food that they have to have, 1.25 grams to produce a kilogram of weight, they have to have fats and carbohydrates to help oxidize these fats. Acidosis does not come from carbohydrates, but does come from fats. In figuring out the food requirements in feeding the child, we feel that these requirements are best taken care of with the use of insulin. Frequently insulin can be lowered and sometimes it has to be raised. It is very important to find out just how and when to give it.

I had a little child several months ago. She brought in a specimen of morning urine for several days, but I did not get anything but a slight amount of albumin. I told her she would have to bring in a twenty-four-hour specimen. As soon as she did, the diagnosis was made and I promptly got rid of her; sent her to someone else for the simple reason that we could not do blood

sugars here. Lots of men do that now and lots of men use insulin without controlling the blood pressure. I personally do not advocate that course, but we may be placed where we cannot get it. Now, we are near Jacksonville and send our children there for study. Of course, an overdose of insulin is easily controlled by a little sugar or a little orange juice.

Dr. Joslin, in reporting the series of cases I have just mentioned, states that he has not had a single case of a young girl developing the menstrual function before the use of insulin, but had four cases under treatment before they had developed the menstrual function and a number of boys who had developed up through what he considered puberty.

Dr. Limbaugh mentioned the case of a woman giving birth to a child. I believe that if I had a patient I would not want her to go through pregnancy. We don't know quite enough about what will be the outcome of this. We do know that arteriosclerosis is an important factor in acidosis even after we have put them on a stringent diet, and we don't know what the effect will be on youngsters, but I don't believe I would want my patient to go through pregnancy if she were a diabetic.

Dr. A. L. Walters, Miami Beach:

Diabetes in children today is up to the psychologist as well as the doctor. They not only have to treat the child but they have to treat the parents. It becomes very irksome if the child has to take insulin for perhaps months or years. They get tired of it. And it is very hard to control them from stealing food, as the best behaved children will do it unless carefully watched. There is one way in which that can be avoided, and that is to give the child a normal diet. And with the use of insulin there is no reason why a diabetic child should not have a diet approaching normal, a diet which will satisfy the child. It has been found that insulin will burn more sugar the more sugar is fed; that each unit of insulin will then burn three or four times as much glucose as when on a low carbohydrate diet. If the child has to take insulin anyway, why not give it a normal diet and a little larger dose of insulin? There can be only two objections brought forward against this method of treatment. One is perhaps the additional cost, but that can be disposed of easily, because it is cheaper to give more insulin and less fats than to give less insulin and more fats. Fats are the expensive part of our diet. By actual figures you will find that a high carbohydrate diet will be cheaper and offset the increased cost of the number of units of insulin required. Insulin costs only ¾c per unit. So the matter of economy does not enter into this diet. The other objection is the increased danger of large doses of insulin, but strange to say there is very little added danger. For some reason not yet understood, a patient on a high carbohydrate diet can withstand quite a variation in the unitage of insulin without showing symptoms of low blood sugar. So these two objections can be dispensed with.

Another point brought out by Dr. Limbaugh but not stressed particularly, is the danger of infections in children who have diabetes. Every infection tends to lower the patient's tolerance. Another thing that often brings a patient to grief unless the situation is well understood, is the fact that when a child does get an infection he may have fever and have a little less appetite, and the physician may lower the diabetic diet. At the same time, being afraid, he also lowers the insulin administered. That is just the time for that child to very likely go into a state of coma. Even if the diet is lowered insulin should not be lowered proportionately. It may have to be lowered somewhat, but a child with fever requires much greater doses of insulin than one without.

Another point about a high carbohydrate diet I wish to mention is the fact that it has been shown in a certain number of cases that patients who have been well standardized for at least two years on a definite dose of insulin and definite measured diet have at the end of two years changed to a high carbohydrate diet and gained materially in their tolerance.

Dr. S. H. Toy, Umatilla:

I would like to ask Dr. Limbaugh in closing to discuss the use of grapefruit in the treatment of diabetes. I have been told that they are using it in Chicago, and that a great many Chicago people have been greatly benefited by the administration of grapefruit. I would like to have him discuss this.

CONCLUSION.

Dr. Limbaugh, Jacksonville:

I might say, first, that I was endeavoring to brighten the outlook of diabetes in children, and of course, purposely stayed away from all detail

of diet. I enjoyed the discussions, however, very much.

The tendency now is, I think, to give more carbohydrate and not quite so much fat. That may answer the question of arteriosclerotic changes after we have followed these children through and they have reached adult life. We were attempting to look ahead when we brought up the subject of arteriosclerosis in children, and stated that we realized that it did not pertain directly.

As to grapefruit being used in the treatment of diabetes other than as a part of the regular estimated, I am not able to discuss, save to say that personally I think when grapefruit is included in the diet it is simply included as one of the fruits of 5% carbohydrates—some are rated as 10% and some as 5%. I am not familiar with their use in any other way. However, I have heard that discussed somewhat indirectly before.

As to the children getting their insulin: I have not had any difficulty in getting them to take it. For example, I noticed a patient four years of age had occasion once or twice to go to the nurse, and holding his arm up as she was about to feed him, say, "I have not had my stick", and seemed willing to get it.

MERCUROCHROME IN THE TREATMENT OF SEPTICÆMIA OF MASTOID ORIGIN*

T. H. Odeneal, M.D.,
West Palm Beach.

Mercurochrome was first employed in the clinic of Dr. Hugh Young, both locally and intravenously, and has since become one of our most universally used drugs.

Great care should be taken in the preparation and administration of the drug and initial maximal doses are contraindicated except in extreme cases. The reaction of different individuals varies greatly, and while some will not be affected by continued treatment, others will manifest a hypersensibility for it. Young has published an exhaustive paper on mercurochrome therapy which covers a variety of diseases, which should be read by every practitioner. Hill and Bidgood demonstrated that mercurochrome in strengths up to 7.5 mg. per kilogram body weight does not produce changes in the kidneys, but when the dose is increased to 10 mg. per kilogram slight damage will occur which clears up in two months. The kidneys, as explained by Redewell and Potter, carry off small amounts of mercury when in a healthy state and are the main emunctory for this drug, but so soon as damage of the parenchyma takes place (from disease or overdose of the drug) the dye is turned back to be excreted by the intestinal tract. The gastrointestinal and urinary tracts have a definite ratio for the excretion of mercury. This, as shown by Lee, is 55 for the urinary and 45 for the intestinal tracts. Piper has revealed that patients with good resistance and healthy kidneys withstand larger doses and improve more rapidly than those with slightly damaged kidneys and low resistance, and cautions against the administration of larger doses in the presence of lowered resistance.

The best results are obtained by small doses at first, gradually increasing the dose, so as not to get a too early saturation of the system with the drug. The most favorable cases are those which give mild reactions.

The bacteriostatic action of mercurochrome is strongest in the blood during the first hour and in the urine during the first five hours. Piper, who is one of the pioneers in this field, states: In patients that are not in extremis but with positive blood cultures we proceed in the following manner: An initial dose of from 20 to 30 c.c. of a 1% solution of mercurochrome is given, depending upon the weight of the patient. This dose is not intended to be in any way curative, but is given primarily to observe the action of the kidneys. If following this first dose there is no apparent decrease in the excretory function of the kidneys, nor increase in the evidence of acute nephritis, we proceed to use what we now consider the maximum dose. This is estimated as 30 c.c. for the first one hundred pounds of body weight, 5 c.c. additional for each thirty pounds above the first one hundred, with a maximum dose of 45 c.c. for any one beyond the two-hundred-pound mark. This is merely a working rule and I should have no hesitancy in exceeding this dosage under certain conditions. Piper further states in a recent number of the Journal of the American Medical Association, two cases of ptyalism are reported following the intravenous use of mercurochrome. I would call attention to the fact that the danger of this condition was

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mentioned in my original paper. It was suggested to me recently by one discussing this method of treatment that the reaction that occurred was due to mercury poisoning. We had always surmised this to be the case, at least to a great degree, but we felt there was a basis for our hypothesis that some of the chill and rise in temperature might be due to the destruction of micro-organisms within the blood stream. This is being borne out in a considerable number of cases. Our results have varied with the different types of micro-organisms shown to be present. They have been good for the staphylococcus and for the streptococcus hemolyticus and non-hemolyticus. This drug in my hands has been utterly useless in the streptococcus viridans. Experimentally it has been of slight value in the pneumococcus. In closing Piper states: 1. This treatment is not infallible. 2. Early diagnosis must be made. 3. Lives have been saved by this method which would otherwise have been lost. 4. We do not believe that this method of treatment is by any means the last word in these conditions, but we do believe it is a step in the right direction. 5. We cannot too strongly impress upon the profession that in spite of reports of brilliant recoveries this is undoubtedly a dangerous procedure and is only warranted by the severity of the condition with which we are confronted. Its promiscuous use is to be discouraged, as this will unquestionably bring whatever merit the treatment may possess in definite disrepute.

Cases cured by intravenous therapy with mercurochrome are too numerous to report here. Some of the more interesting are the following: Trout and Groseclose report a positive diplococcus septicæmia following tonsilitis with thrombosis of the jugular vein with recovery. Schwab reports recovery from streptococcus septicæmia complicating mastoid infection. Porter reports three cures of septicæmia complicating mastoiditis, one a pneumococcal infection, but this case had also had the jugular vein tied, so it was impossible to determine the value of the mercurochrome. In the Young and Hill series of cases reported the colon bacillus and staphylococcus predominated. Harris reports a case of furuncle of the nose with complicating septicæmia. With the exception of the cases reported by Schwab and Porter I can find no other evidence of mercurochrome having been employed for septicæmia of otitic origin. This condition is met with frequently and since all cases of septicæmia are serious, it is my opinion this method of procedure should be given a trial, but not at the expense of ligation of the jugular and other operative procedures that may be indicated. It may be advisable to make use of one of the other dyes in place of mercurochrome where the first injection is without effect. We know that gentian violet will destroy all gram positive germs and we know that acriflavin will destroy all gram negative germs, and acriviolet both gram negative and gram positive organisms, therefore it is believed that further experiments in the intravenous use of dyes will be of inestimable benefit to mankind.

There can be no question that mercurochrome is most effective against the staphylococcus and colon bacillus, so much so that it can almost be classed as a specific against these organisms.

Technic Employed—The solution should be freshly prepared and given every forty-eight hours or according to the result obtained. A 1% solution of mercurochrome, made by dissolving ordinary mercurochrome 220 soluble tablets in hot distilled water (it is not necessary to sterilize the solution), is allowed to cool and injected slowly in a large vein in the bend of the elbow. At least 3 mg. of the mercurochrome should be employed to each kilogram of body weight. This amounts to in the neighborhood of 23 c.c. of a 1% solution of mercurochrome to each one hundred pounds of a patient's body weight. In severe cases as high as 8 mg. per kilogram body weight may be given, but according to Young, never more than this.

Case—The patient was a boy of twelve, who had from time to time acute exacerbations of a chronic otitis media, with intermittent dry and wet periods. I was called to see the child to find he had a temperature of 104, which did not lessen the next day. Both ears were discharging. The family physician pronounced the lungs, kidneys, etc., normal and he was carried to the hospital on the second day after I had seen him. An X-ray disclosed both mastoids very cloudy but of a sclerotic nature, which was to be expected in a long-standing case. On operation, a bilateral modified radical exposure, the mastoids were found to be ebonized, with very few cells and the sinus plates on both sides ivory white, which indicated the lateral sinuses were normal. After operation the temperature continued elevated, running as high as 105.5, the patient becoming comatose. A remarkable feature of this case was that the pulse never went over a hundred, and

as is often the case, no chills were present. A blood culture proving negative for septicæmia, the blood was tested for typhoid as this will often resemble septicæmia; malaria was also ruled out, as was tuberculosis. A second culture taken later gave a pure strain of staphylococcus aureus.

Now that it was definitely established that a septicæmia was present and no other focus of infection having been discovered, there must of necessity be an infection, by way of the ear or mastoid, of one of the sinuses of the brain, and most probable, one of the lateral sinuses, but which side was affected could not be discovered without an exploratory operation, and this I did not think advisable, due to the intact sinal plates. Dr. George Tobey's interesting discovery, by means of the positive Queckenstedt test, of detecting the presence of thrombosis of the sinus and the side involved, had not been published and I therefore did not have this to aid me. Finally it was deemed advisable to resort to mercurochrome and not employ any further operative procedure.

A first injection of 3 c.c. of a 1% solution of mercurochrome was given intravenously which caused a severe reaction but brought the temperature down on the second day to 100 F., which was the first time it had been below 104 F., when a second injection of 5 c.c. was given, without a reaction, and this was followed by an injection of 7 c.c. with some reaction. The blood was still positive, but after another injection of 7 c.c. gave a negative reaction and the patient was to all appearances entirely recovered, and has remained well since, after a two-year period. At no time was there albumen in the urine or any intestinal derangement.

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DISCUSSION

Dr. H. Marshall Taylor, Jacksonville:

I am glad Doctor Odeneal brought this subject before us. The only way we are going to come to a definite conclusion relative to the mercurochrome treatment of sinus thrombosis of otitic origin is by a large number of case reports which are carefully worked out and only from a large number of cases can our deductions be of value.

Recently I have had occasion to use mercurochrome in a case of sinus thrombosis which showed a streptococcemia. An internal jugular ligation was done without any evidence of improvement; the patient continuing to have chills daily, with a temperature reaching 106. 18 c.c. of a one per cent solution of mercurochrome was given. A definite improvement in this case was immediately shown, cessation of chills, a decrease in leucocytosis, and patient ultimately recovered.

The recent literature on this subject leads the otologist to believe that mercurochrome will play a valuable role in the treatment of sinus thrombosis.

CONCLUSION.

Dr. T. H. Odeneal, West Palm Beach:

I think that at the time mercurochrome first came out we all knew there was a great deal of experimenting going on. But at the present time it is on a pretty firm foundation just what mercurochrome will do in the majority of cases.

I think it should be held just for the serious cases alone, and not employed for every type of case. Now, septicæmia of course is a very serious condition, and my own personal opinion is that mercurochrome should be used in every case of septicæmia and given a trial, but just as I said

in my paper, not at the expense of surgical procedures. I believe in surgical procedure before all else—first surgical procedure and then mercurochrome, I think that is about the basis now.

SQUINT*

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Jacksonville.

Strabismus, squint or cross-eye, may be said to exist when there is inability to fix an object with the two eyes simultaneously. An object is said to be fixed when the eye is in such position that an imaginary line may be drawn from the object passing through the optical center of the eyes to the macula. This imaginary line is termed the visual axis. The normal ocular apparatus, when looking at an object, fixes it with both eyes, or in other words, the visual axes converge simultaneously upon the same object. With both eyes open, if in looking at an object, one eye fixes it while the other turns inward, the condition is known as convergent squint. Should one eye turn outward, it is termed divergent squint. Occasionally one sees an upward or downward deviation of the non-fixing eye, but the lateral deviations are by far the commoner.

With the visual ray passing to the macula of each eye, a visual impression is made on each retina. These impressions are in turn transmitted backward along the optic pathways to the visual centers. The two images transmitted to the brain are fused and in this manner binocular vision is obtained. Experimental demonstrations of the fusion faculty may be made by looking into the ordinary stereoscope. Two similar objects are viewed by separate eyes and instantaneously fused or blended by our socalled fusion centers.

It is interesting to note that even in earliest infancy the fixation reflex is present. For example, if a light is thrown into the eyes of an infant just a few days old, the eyes will immediately turn toward it. The fixation is held only momentarily. After several months the infant will show a desire for binocular vision and this desire increases progressively with the development of the child.

According to Worth, the fusion faculty is complete by the end of the sixth year, and if not developed prior to this time, the faculty is irreparably lost. When an eye deviates, it is obvious that the image transmitted by it to the brain must be suppressed in order to avoid double vision. Once this has occurred, it is difficult or impossible to reestablish vision in this eye.

In order that one may understand the more important contributing factors in squint, it will be necessary to briefly refresh your memory as to the commoner refractive states.

(1) Emmetropia—the normal eye or one in which parallel rays are focused on the retina when the muscle of accommodation is at rest.

(2) Hypermetropia—the short or far-sighted eye or one in which parallel rays are focussed behind the retina. The muscle of accommodation may or may not be able to overcome this.

(3) Myopia—the long or near-sighted eye or one in which parallel rays are focused in front of the retina. Even though the muscle of accommodation is in a state of extreme relaxation, the parallel rays cannot be focused on the retina.

(4) Astigmatism—a variance in the arc of the refractive meridians. This is the commonest refractive error and may be combined with either myopia or hypermetropia.

Accommodation: It is obvious that if in a normal eye parallel rays of light are focused on the retina, that in looking at a near object divergent rays enter the eye. Some additional refractive means is necessary and this is afforded by the ciliary or accommodative muscle, which by contracting causes an increase in the convexity of the crystalline lense and thus brings the divergent rays to a focus on the retina. Convergence: In looking at a distant object we generally consider the eyes as being parallel. In looking at a near object, the visual axes must converge, or in other words the internal recti muscles must contract. Accommodation and convergence are synchronous, for in viewing near objects we must have both faculties, if we are to accomplish acute vision. These functions are most important in considering the etiology of squint, for the majority of convergent squints are associated with a hypermetropia, which necessitates more than the normal amount of accommodation in order that an object looked at may be focused on the retina. This in turn causes an over-amount of convergence and the internal squint is the result.

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*Read before the Alachua County Medical Society, April, 1926.

A brief classification of the etiology of squint will be appropos at this time.

1. Refractive errors—(a) myopia, (b) hypermetropia, (c) astigmatism, (d) anisometropia (unequal refractive errors of the two eyes).

2. Defects in the fusional faculty.

3. Anatomical defects as paralysis of ocular muscles and congenital anomalies.

4. Blindness.

Squints resulting from ocular muscle paralysis are of especial interest to the general practitioner. The deviation may be outward, inward or vertical, depending upon the particular muscle or muscles involved. A squint due to paralysis may be differentiated from other types of squint by determining the inability of the patient to turn the eye in the field of action of the muscle involved. Syphilis is the most frequent cause of ocular muscle paralysis. Diphtheria, whooping cough, epidemic meningitis, influenza and the acute exanthematous diseases are also frequent etiologic factors. Congenital anomalies are occasionally a factor. The treatment of this type of squint is the treatment of the general condition augmented by some of the usual methods of treating the ordinary squint.

The general physician is the one who usually has first contact with patients afflicted with the squint deformity and for this reason it is paramount that he should inform himself as to the hazards that will result in untreated cases. Too often the fond parents of a cross-eyed child are told that their child will outgrow the deformity and procrastination results in a continuance of the cosmetic handicap, as well as permitting a rapid deterioration of the vision in the deviating eye. Many of these patients if seen early by a competent oculist could be treated by refractive correction and exercises and the necessity of an operation avoided. The reasons for advocating early correction of squint are three in number, viz: (1) Loss of vision in the deviating eye will certainly follow disuse and a squinting eye is not used. The rapidity of deterioration may be said to be greater in the very young and that it lessens with the increase in years. (2) Unless treated, loss of binocular vision, or the power to use the two eyes together, will ensue. (3) Cosmetic improvement. Many children grow to adulthood laboring under the severe handicap of being cross-eyed. In school they are backward and timid because of their deformity. They avoid contact with other children. As they mature they become more and more conscious of their handicap and after reaching adult life continue to be retiring and backward. What is more pitiable than a young, otherwise attractive woman with an eye that turns in or out? It is interesting to note the change that takes place in adults who have squint deformities corrected. Frequently a person of retiring disposition and with little care of personal appearance will undergo a complete transformation.

The treatment of squint varies, but every patient afflicted with such a deformity should receive a most thorough examination by a competent oculist at the earliest possible opportunity. The first point to be determined is the cause of the deviation. If a paralysis of an ocular muscle is the etiologic factor, then additional information is to be sought as to the cause of the paralysis. This should be handled in conjunction with the general practitioner as well as the subsequent general treatment that may be necessary. Refractive errors are always to be held uppermost in one's mind when investigating a squint and should invariably be estimated only after a complete relaxation of the ciliary muscle by means of thorough atropinization. It is my rule to have all squinting patients who have a refractive error of any consequence wear lenses continuously over a period of at least six months before advising further steps. Combined with the wearing of lenses, exercise of the lazy or deviating eye is obtained by covering the strong eye for a definite period each day. This forces the deviating eye to fix and in many cases increases vision.

Many patients will require operative interference. The age at which this should be done is a most important point. Frequently parents are instructed to wait until their child reaches the twelfth or fifteenth year of life for the operation. During this time a total or partial loss of vision in the affected eye occurs, to say nothing of the loss of the fusional faculty. As soon as I have assured myself that non-operative measures will not suffice to correct a strabismus I advise operation without delay.

We have in general two operative procedures: 1. The weakening of an overacting muscle; 2. The strengthening of an underacting muscle. The tendon of the muscle at its insertion into the eye ball is severed either partially or completely to effect this weakening in the usual tenotomy operation. The preferable method of increasing the action of a weakenend muscle is by resecting the desired amount and then reattaching the cut end to the insertion by suture methods. Fre-

quently it is necessary to combine the resection and tenotomy in order that the desired result may be obtained. Local anesthesia, namely cocaine, is effective in all adults and many children, although at times general anesthesia is necessary.

In concluding let me stress the following points:

1. Squint demands early correction to save the vision of the affected eye, to preserve fusional faculty, and to remove a most serious handicap to the patient's physical appearance and progress in life.

2. After once determining that non-operative treatment will not relieve the squint, operative interference should be undertaken without delay.

3. A large percentage of squints can be overcome by non-operative measures. Those cases that are not relieved in this manner can in most instances be relieved by surgery.

FRACTURES OF THE SHAFT OF THE FEMUR TREATED BY TRACTION*

F. L. Fort, M.D.,
Jacksonville.

Our present age is one of machinery and fast locomotion. There is an ever-increasing percentage of fractures of all kinds. Fracture of the thigh is a common injury. Also, it is a major injury, which gives us much concern. For in spite of the wonderful advancement in recent surgery, the only person who has *no* bad results in fractures of the femur is the man who does not treat them. A perfect result is still cause for congratulation, while a poor result is a life-long testimonial of the surgeon's inefficiency.

Time forbids a consideration of the treatment of all fractures of the femur. Consequently we will only discuss fresh fractures of the femoral shaft not involving the head, neck, trochanters or condyles of the femur. The types of fracture are, simple and compound, tranverse, spiral and comminuted.

The method of treatment I wish to present to you is not new, altho it has been popularized or practiced more generally since the World War. I refer to the use of traction and counter-traction on the point of fracture, by any one of the several means available. The use of traction, when intelligently used, has repeatedly proven to be the safest, most efficient, and possibly the quickest method of treating a fractured femur. The percentage of bad or poor results treated by efficient traction will be much lower than by any other one method.

Occasionally open operation must be resorted to in severely comminuted fractures with badly displaced fragments, or in the long spiral fractures with soft tissue intervention. Compound fractures usually require open operation for removal of foreign bodies, devitalized tissue, and replacement of the fracture. The subsequent treatment of compound fractures following debridement operations, should always be that of constant traction and counter-traction the same as for closed fractures.

Complete fracture of the shaft of the femur always develops one or more of the deformities of rotation, angulation, or overlapping of the fragments. These deformities result from the force of gravity and from muscle pull (or spasm). Both are always present. The aim of all treatment is to overcome these two forces, and maintain the corrected position until union occurs. The best method of obtaining this result is what concerns us today.

The common method of applying a plaster cast from the waist down to the ankle after reduction has three principal objections:

First, rotation is not prevented unless the foot is included in the cast.

Second, it is next to impossible to overcome the tendancy towards overlapping or slipping of the fragments later, even though strong traction is made on the leg while the cast is being applied.

Third, a cast applied about the thigh tight enough to prevent motion at the site of fracture interferes greatly with the circulation of the limb, and results in delayed callous formation and muscle atrophy. A cast that is applied tight will be quite loose within ten days to two weeks, due to decrease in swelling and muscle atrophy.

Having already admitted that a few fractures of the femur require open operation, I wish to stress some of the dangers or contra-indications of this method, when used routinely.

Foremost of these dangers is that of infection. The extra trauma of open operation added to that of the original injury lowers the local resistance of the tissues against infection to a dangerous degree. Foreign bodies of all kinds are always irritating to the tissues and predisposed to infection. With the most painstaking technique and the best of hospital facilities, infections will occur in too many cases, where screws,

*Read before the 53rd Annual Meeting of the Florida Medical Association, Gainesville, Fla., May, 1926.

plates, wires, bands, etc., are used, to make their use a routine procedure. I do not believe they should ever be used primarily in compound fractures. We often see well reduced fractures, later with the wires or plates broken, or screws pulled out and the deformity recurring.

Another objection to open operation is that of adhesions of the muscles to themselves, to the skin, or the bone. This results in limited knee flexion and pain on motion for an indefinite period of time.

Fracture of the femur is always accompanied by considerable shock, especially in the old or debilitated. The extra shock of open operation is sometimes more than we are warranted in inflicting.

Sometimes the patient with a fractured thigh presents some visceral lesion, particularly of the heart, lungs, or kidneys, which contra-indicates, or even excludes any operative procedure under anesthesia.

Maintaining fixation is practically as difficult following internal fixation operations as in those cases treated otherwise. Likewise the daily inspection of the leg for measuring, or for physiotherapy is impossible when casts are used. A final objection is that people do not like to be operated upon whenever it is avoidable. Personally I would consent to operation only as a last resort. The patient, when allowed to choose, will always prefer the conservative or non-operative method of treatment, if equally effective.

There are several distinct advantages in the traction method of treating fractures of the thigh routinely:

First, hospitalization of the patient, altho preferable, is not essential. Efficient treatment can be carried out in the home when adequate hospital facilities are not available.

Second, there is no danger of infection from treatment by the traction method.

The correction of the deformities of angulation, overlapping or rotation is fairly easy in the vast majority of cases, where sufficient *pull* is exerted. Occasionally in very muscular subjects, extension up to 40 or 50 pounds is necessary to overcome overlapping of the fragments. With sufficient extension, every fresh fracture can be corrected. Traction overcomes muscle spasm and consequently removes the most potent force in producing deformity.

The soft tissues, when put under tension, are pulled out straight and from between the ends of the fragments. Non-union from soft tissue interposition will practically never occur in the traction method of treatment. Also badly comminuted fractures are often better reduced by putting the thigh muscles under tension, than by any other procedure.

The difficulty of maintaining position after reduction, by whatever means, is our great problem. With sufficient traction however and the leg in a ring splint, the task becomes quite simple. However, daily inspection and the use of the tape measure must be done religiously for the first two weeks or more. Any tendency towards deformity is readily detected and also easily corrected.

The patient's comfort, in my experience, has been greatly augmented by the traction method of treatment. Large plaster casts are ill-borne in most cases, especially in our semitropical climate. Fixation with sand bags or boards is not effective or comfortable.

The time of solid union and mobilization of the leg is shorter in most cases by the traction method than by any other. The circulation of the leg has not been impeded. The muscles are not so badly atrophied, especially where massage and baking have been used. Callous formation with good circulation is more rapid than when the leg is encased in plaster.

The ideal treatment of fractures is to get solid union in the shortest period of time with the least amount of pain and deformity. I am firmly convinced that this goal is nearer obtained by some form of traction and counter-traction, in fractures of the femur, than by any other method.

As to the best method of applying this form of treatment, no fixed rule can be given. Each case must be treated according to circumstances. Children under seven years of age are most conveniently treated by overhead traction with adhesive tape on the leg from the point of fracture down to the ankle. The body weight acts constantly as the counter-traction. The bedside care of the patient is easy; while results are excellent.

The majority of the cases are most conveniently treated by means of adhesive skin traction applied from the point of fracture down to the ankle and ending in tapes which are fastened to a foot rest. From the foot rest a rope is extended over a pulley at the foot of the bed. The necessary weights are attached to this rope. The extended leg lies in a ring splint simply as a trough for protection. Canvas slings can be

used about the thigh to overcome any tendency towards bowing in any direction. Rotation is prevented by binding the leg in the splint. Then the leg and splint can be maintained as one, in any desired degree of rotation or abduction. The leg and splint are elevated about 30° while the foot of the bed is elevated a like amount, so that the body weight acts as a counter-pull. If it is desired not to lower the head of the bed, the patient can be fastened to a Bradford frame, so as to fix the upper fragment. The frame facilitates the nursing care, especially in heavy adults.

I have found counter-traction by pressure of the padded ring up against the ischial tuberosities not satisfactory. Because it is uncomfortable to the patient, and often causes pressure sores. It is difficult to maintain sufficient traction in this manner. Likewise fastening the foot to the bed or end of the splint is not satisfactory, because every move made by the patient disturbs the fracture. Extension should be by means of weights and pulleys, which gives a constant traction whether the patient moves up or down in bed.

In muscular individuals adhesive skin traction is not sufficient to overcome muscle spasms and overlapping of fragments. In these cases it is necessary to use skeletal traction, preferably by means of calipers or ice tongs fastened to the femoral condyles. This method will always enable you to secure sufficient pull to correct and maintain position. By this method the knee can be mobilized from the outset, which cannot be done by any other method. Contrary to appearances or popular belief, there is very little pain caused by the calipers. They can be applied under local anesthesia. The danger of infection is negligible. Rotation is easily controlled.

In conclusion I wish to repeat that the nearest approach to ideal treatment of fractures of the femoral shaft is and will be by one of the several methods of traction and counter-traction.

DISCUSSION

Dr. R. A. Ely, Tampa:

I don't think we can disagree with Dr. Fort on anything; I think his paper was well gotten up.

But there is one thing I would like to reenforce. There seems to be a difference in opinion, as always in the practice of medicine, concerning the use of plaster paris. During the last year I bought, I think, the latest text-book on fractures, and about the same time Robert Jones came out with a statement which entirely disagrees with this book. This text-book says put up all fractures in plaster; and over this text-book Robert Jones comes out about the same time and says that it is a pernicious practice to put all fractures in plaster. Now, I think that Robert Jones is more nearly correct than the other man. I think that when we have a fracture the very best thing is to first treat it in extension like this, or put it in some kind of splint, and then later on if you want to, put on your plaster—that is in certain other fractures, but in this particular fracture I don't think that there is anything else but extension. I have seen not a few cases where plaster was put on and the edema afterwards was terrible. And for that reason I think that one point should be stressed—plaster should not be put on any fracture at the beginning.

Dr. J. K. Simpson, Jacksonville:

Unfortunately, I did not hear all of Dr. Fort's paper. I know Dr. Fort's work, though; have seen a good deal of his work, and his X-rays do not do his work justice. They never do any man's work justice who is doing competent fracture work. Because X-rays do not show the result that we are aspiring to. They show that a bone is in line, but they do not show that you have well functioning joints above and below the fracture, that you have competent well functioning muscles, and an absence of this hard brawny edema that frequently occurs in poorly treated fractures. I think the X-ray has made us hypercritical of our anatomical results, but after all anatomical results are not so important, I think, as the physiological results. That is, get a well functioning extremity by treating these cases, no matter what method you might use. My personal preference is for extension and mobilization of the joint above and below at the very earliest possible moment. My method in the way of fractures has changed very largely since I first started out. I had the idea that the main thing was to get the bone in position and hold it there regardless of whatever else might happen. And now, especially in Colles fractures, we put a splint on for a week and after that practically no splint at all, or possibly a little bit of board two or three inches long with adhesive strip along the wrist. Fractures properly reduced will stay reduced without any extraordinary efforts or any extraordinary mechanical appliances. The main idea is to get the fracture in the proper position

and then pay most attention to muscles and joints.

I know Dr. Fort does this. I have seen his results and know they are excellent, and the last X-ray of course is a peach. But I don't think that X-rays ever do justice to a man's work when he has worked out competent fracture work.

Dr. F. J. Waas, Jacksonville:

I am very anxious to have Dr. Teeter put in the slides of the case that came under my observation that Dr. Fort so excellently handled. There are a few points I would like to bring out that made a very wonderful impression on my mind.

This case was operated by my associate, Dr. W. R. Schnauss, as I was out of the city at the time. The thing I would have done was exactly what Dr. Schnauss did—put in a bone plate. After reduction under anesthesia, he could not get any position at all, so he decided to operate and put in a bone plate. As you see, the alignment is very nearly perfect in every way (demonstrating with slides). But, unfortunately, we got no union even though everything was absolutely perfect. She developed evidence of infection, so I went in myself and took the plate out. The mistake that I made was in not putting traction on after removal of the plate. I felt that the plaster would hold in position, but the patient was a non-cooperative patient, very hard to control, and that, I think, is what caused the bad results that we had. At the time that Dr. Fort was called in on the case, we were thinking of doing a sliding bone graft, which, to my mind, was the way I would have handled this case. But the case was turned over to Dr. Fort, and this (demonstrating) just shows what traction will do.

When we went in and took the plate out, we got some displacement. I believe that if we had put traction on we would probably have been able to get the same result that Dr. Fort had. I want to commend Dr. Fort, because this is one case that I watched almost through, and I must say the results are wonderful from a traction standpoint.

CONCLUSION.

Dr. F. L. Fort, Jacksonville:

As to the plaster cast, I don't think you can lay down any definite rule.

Never use a plaster cast in the beginning as there is too much swelling. There are other methods by which you can immobilize fractures. However, it is a matter of what is the most convenient means of immobilizing the fracture in reduced position, and sometimes the cast is indispensable. That is, I think sometimes we are almost obliged to use them, but just to use them absolutely as a routine is not necessary, and is in my experience a very poor policy. Dr. Simpson, I think, is quite right in saying that the X-ray does not do justice to the end result in fracture work. What is anatomically, as seen in the X-ray, a very poor result, may be an excellent physiological or functional result; and that after all is what we are striving for. And as I stated in the paper, if by this traction method you can get them back on their feet without deformity you can then apply physio-therapy—which you cannot do in a plaster cast.

I wish to thank Dr. Waas for explaining his case, also.

LEAD POISONING IN CHILDREN*

L. W. Holloway, M.D.,
Jacksonville.

Every physician is familiar with the type of child who has a perverted or capricious appetite for articles which are not natural foods.

This condition is known as pica or parorexia.

Ruddock[1] in a very illuminating article has called attention to the hazard of lead poisoning to children who suffer from pica.

These children gnaw and eat any article with which they come in contact.

All painted objects such as certain toys, white furniture, rails of kiddie-coops, porch railings, window sills and powder cans may afford the means by which little children become the subjects of chronic lead poisoning.

Lead gains entrance to the organism through the gastro-intestinal tract. This has been thought to be the main avenue of introduction.

Holt,[2] in 1923, reported a case of lead poisoning due to the inhalation of dust containing lead.

Aub,[3] Minot, Fairhall and Reznikoff, in a report of studies, made in the laboratory of physiology at Harvard University, on the absorption and excretion of lead, state "that lead given to cats by stomach tube is soon recovered in large amounts from the feces. Later it became clear that this occurs partly because most of the in-

*Read before the 53rd Annual Meeting of the Florida Medical Association, Gainesville, Fla., May, 1926.

gested lead is not absorbed, and partly because a greater portion of the fraction that is absorbed is caught by the liver and reexcreted into the intestinal tract in the bile.

"Absorption from the respiratory tract on the other hand is very rapid and dangerous. Blumgartt, working in this laboratory, found that, within twenty-four hours, a relatively large amount of lead could be absorbed by the organism when the only path of entry was through the nose and mouth. This he did by tying off the esophagus in cats, and by inserting a canula into the trachea, through which the animal breathed. In such a preparation there is no connection between the naso-pharynx and the lungs or the stomach, and inhaled substances cannot enter the gastro-intestinal tract. Lead carbonate dust, even though it is quite insoluble, is rapidly absorbed when sprayed into the nose under these conditions. Blumgartt determined this by analyzing the various organs of the body for lead.

"Injection of lead into the trachea and so into the lungs of the animals prepared in this way leads to similar results. Indeed as much lead may be absorbed from one injection into the respiratory tract in one day as from the gastro-intestinal exposure lasting for months. The degree of respiratory absorption is evidenced not only by the quantity of lead absorbed, but also by the rapid appearance of the lead line and other characteristic symptoms."

I will report here data from eight cases of lead poisoning which have been observed by me.

Five patients were boys, three were girls.

The ages ranged from eleven months to four years.

All gave histories of being subjects of pica.

Every case presented a clinical picture of secondary anemia. The hemoglobin averaged fifty-five per cent. There was a reduction in the total red count ranging from one-half to one million cells. Three of the cases showed stippling of the red blood cells. One case showed eighteen to twenty stipple cells to each field.

All the patients were constipated and two had periodic attacks of diarrhœa.

Colic was a prominent feature in each of these cases.

Five had vomited off and on since exposure to lead had begun. The exposure to painted objects ranged from four months to sixteen months.

The lead line was observed in only one case and that in one who had inhaled lead dust.

No paralyses were observed.

Lead was recovered from the stools in five cases.

Lead was found in the urine in three cases.

Two cases of the series represent types of acute poisoning from inhalation of lead superimposed on the chronic intoxication. These two cases showed the picture of lead encephalopathy or involvement of the nervous system.

The first case of this type had slept for two nights in a room freshly painted. This occurred during January. There was very little ventilation and consequently the child inhaled a lead-laden atmosphere. He became violently nauseated and had severe cramps in the abdomen revealed by his sharp cries. Vomiting ensued and persisted for eight to ten hours. This was followed by generalized convulsions which lasted for fourteen to sixteen hours.

The second case inhaled lead dust while in a room where paint was being scraped and sandpapered from lumber which had been previously used. This child had generalized convulsions for thirty-six hours and in the intervals between seizures would remain in a state of coma. Double choked discs were present in this case.

Lumbar puncture was done on these cases and the fluid was under great pressure. The puncture relieved the convulsions.

The history of exposure to lead helps to differentiate this condition from brain tumor, encephalitis, cerebral hemorrhage and tuberculous meningitis. The finding of lead in the urine and feces and the presence of stipple red blood cells clinch the diagnosis. The spinal fluid of the last case was injected into a guinea pig to differentiate this case from tuberculous meningitis. The guinea pig lived.

TREATMENT

There are three phases to the treatment.

1. The most important is prophylaxis by informing parents of the hazard of painted articles to little children. Varnishing all articles with which they come in contact will prevent poisoning.

2. For the convulsions lumbar puncture has relieved the situation in our cases. For the anemia tonics and fresh air are indicated.

3. Melser in 1840 first used potassium iodide to promote the elimination of lead from the organism. This is now believed to be dangerous

in some cases by causing an aggravation of symptoms as the lead deposits are released from the hard portions of the skeleton. Aub et al. recommend the use of ammonium chloride in a dose of eight to twelve grams a day or twenty to twenty-three c.c. of dilute phosphoric acid sweetened like lemonade as the best eliminant of lead, they also recommend the use of sodium bicarbonate in a dose of forty grams in twenty-four hours to hasten the elimination of lead. They state that twice as much lead is eliminated with the use of the acid as when the alkali is used. A diet with a low calcium content furthers the release of the deposited lead. Milk is contraindicated owing to its high calcium content. A diet such as meat, potatoes, rice, macaroni, apples, bananas, sugar, salt and milk-free bread is recommended for these cases. Milk and eggs and other articles not included in this list should not be considered in the dietary.

CONCLUSIONS.

1. Lead is a hazard to small children.
2. Many cases of lead poisoning are overlooked.
3. Education of parents through public health agencies as to the likelihood of lead poisoning in children is suggested.

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TEST FOR LEAD.

Considerable urine is evaporated to dryness, and 50 c.c. of fuming nitric acid is added; after the reaction has subsided, it is allowed to simmer over the free flame for one-half hour, and then 25 c.c. more acid is added three times each fifteen minutes. The fluid is then evaporated to a small volume, neutralized with sodium hydroxide, filtered and the lead tested with hydrogen sulphid, which will give a brown precipitate.

DISCUSSION

Dr. W. W. Kirk, Jacksonville:

I think that Dr. Holloway is to be commended for bringing to the attention, as Dr. Osincup remarked, of the profession to this condition of lead poisoning in children.

In the larger industrial centers it is a very common thing to find lead poisoning in adults—so common that all the hygienic procedures taken against it are apparently so well known to the laborers in the plant that often very little real attention is paid to it by them.

I think that lead poisoning in children is a condition that is sporadic everywhere, because the supply is ever present. Lead in very small quantities can give trouble to susceptible individuals.

Regarding the laboratory end of this lead poisoning proposition: As you probably know, the man who is associated with the laboratory and is given a number of different specimens to give some definite and reliable answer on to the awaiting surgeon or internist is called on sometimes to do a great deal. And we are called on to give very definite answers as a rule. I feel if the condition, lead poisoning, is suspected, that this is one of the conditions in which the pathologist can render real service, because the test for lead is not difficult. It is present both in the feces and the urine. The blood picture, although not absolutely distinctive, is quite characteristic.

There is a good deal of talk about stippling of the red cells in lead poisoning. Stippling of the red cells is found in practically any severe blood disturbance, particularly in severe pernicious anemia cases and at times in leukemic conditions. It is one of the commonest things that is found in lead poisoning. The red cells easily become stippled and we quite often find fifteen or twenty points to each cell. The red cell count is not particularly helpful as you hardly ever have less than four million, hemoglobin from 50 to 70 per cent. In our malaria districts in Florida, where the resistance is quite low, I think we often find routinely hemoglobins of 50 to 70 per cent.

The point of coming to a final diagnosis: This would rest more upon the demonstration of lead oxide in the urine and feces. The lead salt is also found in the bony substance. Sometimes the lead deposit is distinct; however, the lead is only eliminated from the bone when it is a great deal in excess and natural hardening of the salt takes a long time for elimination.

It is not necessary to go into technical detail as to localizing and detecting of the lead salt. That is a very technical thing. I want to emphasize one thing: If you are just going to test the urine or feces once, you will probably get a negative report in these cases. It is more or less like a tubercular condition in this regard.

(*Continued on page 100*)

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SEVENTEENTH DISTRICT—DR. JOHN S. MCEWAN . *Orlando*
Osceola, Orange.
EIGHTEENTH DISTRICT—DR. S. G. HOLLINGSWORTH . *Bradenton*
Manatee, Sarasota.
NINETEENTH DISTRICT—DR. D. L. MCSWAIN . . . *Arcadia*
DeSoto, Hardee, Highlands.
TWENTIETH DISTRICT—DR. WM. R. WARREN . . . *Key West*
Monroe.
TWENTY-FIRST DISTRICT—DR. ROBT. C. BOOTHE . *Fort Pierce*
St. Lucie, Okeechobee, Indian River, Martin.

HARVEST MITES OR RED BUGS

A rather common pest, which has a wide distribution and is most prevalent during the summer and fall months, is the harvest mite, also called red bug, chigger, or jigger. It is so small as barely to be seen by the naked eye when penetrating the skin close to the root of a hair, attention having been drawn to the spot by slight burning or itching. Later on, the intense itching that is set up by these semi-parasites interferes with sleep, and by scratching to relieve this itching, a severe skin infection and inflammation may be produced particularly in children. As the mite penetrates deeper into the skin the itching increases, a slightly reddened area makes its appearance at the root of the hair, and increases in size, usually reaching its full development about the third day, when it is perhaps a half inch in its greatest diameter, sharply defined and very irregular in shape. In another day or two the itching subsides and the red spot gradually fades.

Harvest mites are collected on the clothing and shoes by brushing against the trees, shrubbery, stumps, logs and decaying leaves and twigs in the woods—then they start crawling and when they come to a fold of skin or a point where the clothing is tight, they start to burrow. They are likely to be most numerous at the shoe top, under the garters or belt line, in the groin, between the thighs, and around the armpits. Sulphur, sifted into the clothing before going into the woods, is a good repellent. A thorough bath, first with kerosene, then soap and water, and a complete change of clothing after such a trip will often prevent much annoyance. The clothing must not be worn again for several days unless laundered, pressed or otherwise treated to destroy any remaining mites.

After the mite enters the hair follicle, some relief may be had by dabbing on the affected spot a little butter or salty grease.

WHERE IS FLORIDA'S BLIND BABY?

The International Sunshine Society's Summer School for Blind Babies and very young blind children has just closed. This Institution is located in Summit, N. J., maintained by a philanthropic newspaper club with headquarters at 96 Fifth Ave., New York City, Mrs. John Alden, Founder and President General.

This is the only institution of its kind in this country, one that will take any blind baby from any State of any creed and color and give it exceptional care until it is old enough to take advantage of the State Schools provided for these children.

When Mrs. Alden realized that few of the children blinded at birth or soon afterwards, reached the kindergarten age mentally and physically equipped, she induced her Federated Club, The International Sunshine Society, to establish such an institution to accommodate the care and instruction of any blind baby that sought its protection.

"We have," said Mrs. Alden, "cared for over 600 children since we started this educational work, and 27 States have taken advantage of our efforts, but Florida has sent no babies here; maybe the Florida mothers of the blind don't know about this institution. It is absolutely impossible for a mother to bring up her blind baby alone, and keep its mind normal and its body perfectly healthy. The baby needs exceptional care, day and night, which can be accomplished only by a relay of workers. A mother can not do this alone no more than she can give it a college education alone."

Mrs. Alden urges the club women of Florida to report to her all blind babies in Florida. A proper census might result in legislative action in behalf of these most helpless of all human beings—BLIND BABIES.

STATE NEWS ITEMS

Dr. A. M. C. Jobson of Tampa recently visited many points of interest in Canada and while there spent most of his time doing post-graduate work in some of the large Canadian hospitals.

Dr. C. B. McKinnon of DeFuniak Springs is in very bad health. Every member of the Association extends sympathy to Dr. McKinnon and especially the members of the Walton-Okaloosa County Medical Society. It is hoped that Dr. McKinnon will experience a complete recovery.

Dr. W. M. Rowlette of Tampa recently visited New York where he spent some time visiting clinics, going from there to various points in the Adirondack mountains.

PINELLAS COUNTY MEDICAL SOCIETY ON THE HONOR ROLL! PINELLAS COUNTY MAY WELL BE PROUD OF ITS RECORD OF 72 MEMBERS WHOSE DUES ARE FULLY PAID. THIS SOCIETY HAD THE DISTINCTION OF BEING 99% PAID AT THE LAST ANNUAL CONVENTION.

Dr. W. Lassiter, secretary of the Alachua County Medical Society, was a welcome visitor at the business office of the Association in Jacksonville September 24th. After looking over the official roster from his Society, memorandum was made of all members who have not paid their annual dues and Dr. Lassiter made a statement that the back dues would be forwarded at an early date. Dr. Lassiter, as city health officer, made arrangements through the State Board of Health to put on a whole-time nurse for Gainesville.

Dr. H. Mason Smith, president of the Florida Medical Association, has just returned from an extensive trip, having visited and studied in the clinics of Boston and Baltimore.

Mrs. W. Lassiter of Gainesville, president of the Ladies' Auxiliary of the Florida Medical Association, has just about completed plans for a new constitution for that organization, which is to be proposed at the next annual meeting. Watch the news column of this Journal for information concerning the Ladies' Auxiliary.

Dr. R. Hippensteel of Fort Lauderdale, former secretary of the Broward County Medical Society, has moved to Indianapolis, Ind., and has associated himself with Dr. L. Sejar.

Dr. R. F. McLeod was elected commander of American Legion Post No. 1 of Titusville on September 28th.

Following the recent storm in Pensacola, the members of the Escambia County Medical Society were quite busy rendering aid to all sufferers. Pensacola did not find it necessary to call for outside aid.

Dr. J. C. Davis and family of Quincy spent the month of August at Andrews, N. C.

Born to Dr. and Mrs. John R. Boling of Bradenton, a boy.

The city commission of Fort Lauderdale has organized a Board of Health.

Dr. James B. Parramore has recently returned to Jacksonville and opened offices in the St. James building after an extended absence doing post-graduate work in New York City. Dr. Parramore will limit his practice to oto-laryngology, bronchoscopy and esophagoscopy.

Dr. M. A. Lischkoff returned to Pensacola after spending the past four months in Vienna and London doing post-graduate work.

Dr. R. F. McLeod and Dr. R. D. Ferguson have opened a twelve-bed private hospital in Titusville. This is the first hospital to be opened in Brevard County.

Dr. Alvah Leo Rowe of Lake Worth was married to Miss Louise Virginia Conner of Enterprise, Ala., on August 11th.

The Board of Medical Examiners, working in conjunction with federal authorities, is exercising every effort to rid Florida of some of its "diploma mill" operators. Dr. G. A. Munch of Tampa was recently arrested by Federal authorities and placed under $5,000 bond. During past years, it is a well-known fact that many irregularities in the maintaining of licenses for practicing medicine in Florida existed. It is the sincere hope of all the members of the Florida Medical Association that the good work started by the Board of Medical Examiners will be carried to the point of ridding the state of all offenders.

When the editor of the Florida Medical Journal took over the Journal files at the beginning of his administration in 1925, the following Journals were missing:

1914—All issues.
1915—All issues.
1916—All issues.
1917—All issues.
1918—March.
1919—March, April, June, August, September, November, December.
1920—January, February, May.
1921—March, June, October.
1922—July, November.
1923—March, April, May.

As yet he has not been able to obtain them, and any member of the Association who can supply the editor's office with these numbers will aid us materially in our work.

Dr. H. D. Snyder, who has been in Atlanta at the bedside of his wife, has returned to Pensacola.

A called meeting of the Escambia County Medical Society was held at the State Board of Health Building at Pensacola, on September 9th. Dr. H. Mason Smith, president of the Florida Medical Association, was guest of honor and principal speaker of the evening, using "Organized Medicine" as his subject. Dr. Smith outlined the advance made during the past few years in obtaining legislation to abolish quackery and illegal practices and explained the bills which

will be brought up at the next session of the Legislature. In concluding, Dr. Smith suggested the consolidation of the Walton-Okaloosa and Escambia County Medical Societies. Following Dr. Smith's address, a few remarks were made by the other guests—Dr. J. C. Davis of Quincy, Dr. J. Q. Folmer of Chattahoochee and Dr. H. Palmer of Tallahassee. After the adjournment of the meeting, a light supper was served.

A meeting of the physicians of Okaloosa and Walton Counties was held at DeFuniak Springs at noon on September 9, 1926, and Dr. H. Mason Smith of Tampa, President of the Florida Medical Association, was guest of honor. Dr. E. Porter Webb of Crestview, Vice-President of the Bi-County Medical Society, presided. Dr. Smith was introduced by Dr. W. C. Payne as Councilor for District No. 1, which district comprises the counties of Walton, Okaloosa, Santa Rosa and Escambia. Dr. Smith made a very forceful address in which he stressed the importance of organized medicine. On account of the small number of physicians residing in Okaloosa and Walton Counties, it has been found impractical to have an active society in each county. Three years ago the two counties were combined into a Bi-County Medical Society and even then the number of physicians is not great enough to stimulate a great deal of interest. Dr. Smith stated in his address that he was making a survey of this district and that he probably would recommend the combining of the four counties into one society, this to be determined later. Dr. Smith had as his guests at this meeting, Dr. H. Palmer of Tallahassee, Dr. J. Q. Folmar of Chattahoochee, Dr. J. C. Davis of Quincy, Dr. Rufus Thames of Milton and Dr. N. A. Baltzell of Marianna. One hundred per cent of the members of the Bi-County Medical Society was present at the meeting. Dr. Smith and his guests left immediately for the meeting at Pensacola where they were entertained the same night at eight o'clock by the physicians of Santa Rosa and Escambia Counties.

HOLLOWAY: LEAD POISONING IN CHILDREN

(Continued from page 96)

But if you will examine it a number of times, you will almost undoubtedly get a positive report, so have three or four tests made. It is interesting to note that long after the clinical symptoms have subsided there will be an appreciable test for lead in the feces and urine. Of the two tests, the urine is more reliable and more satisfactory, because insoluble lead salts may pass through the bowel without being absorbed by the tissues. I feel that the bones will take up lead salts and hold it for a long time, and therefore that the test can be made best on the urine as a last analysis rather than upon the blood picture which is not absolutely typical, or upon the feces for the reason mentioned.

CONCLUSION.

Dr. L. W. Holloway, Jacksonville:

I have nothing further to add, but I want to thank the gentlemen who discussed my paper so thoroughly and nicely. I thank you.

ADVERTISERS' NOTES

SENSITIZATION

Proteins in the food or even floating in the air are capable of causing no end of trouble to people who are sensitized to them. And this is an alarmingly common experience.

The ideal extract for the purpose is one that is, in the first place, reliable, and, in the second place, easy to apply. The diagnostic pastes offered by Parke, Davis & Co. strike us as a commendable line; the only apparatus the operator requires is a needle and a few sterile toothpicks. See the Parke, Davis & Co. ad in this issue.

WHAT TO DO FOR BURNS

The most important requisite in the treatment of burns is *relief from pain*. Another important factor is the prevention of infection. There is only one chemical compound which, in a single remedy, accomplishes both of these purposes. Butesin Picrate combines the analgesic, pain relieving properties of butesin, a practically nontoxic local anesthetic of the same type as anesthesin, but two to four times as powerful, and the antiseptic action of picric acid, which in itself has always been a popular medicament for burns.

Physicians recommend and use Butesin Picrate preparations because they are approved by the Council on Pharmacy and Chemistry of the American Medical Association.

Recent literature on Butesin Picrate Ointment may be obtained by writing the Abbott Laboratories, North Chicago, Illinois.

SCHEDULE OF MEETINGS—COMPONENT SOCIETIES FLORIDA MEDICAL ASSOCIATION

County Society	Secretary	MEETINGS Date	Time	Place	Luncheon?	Dues Paid
Alachua	W. Lassiter, M.D., Gainesville.	2nd Tuesday	12:00 Noon	White House	Yes.	71%
Bay	J. M. Nixon, M.D., Panama City.					100%
Bradford	Seeber King, M.D., Lake Butler.					100%
Brevard	R. D. Ferguson, M.D., Titusville.	Varies		Varies		100%
Broward	Leigh F. Robinson, M.D., Ft. Lauderdale.	2nd Tuesday	8:00 P.M.	Chamber of Commerce	No.	100%
Columbia	L. J. Arnold, M.D., Lake City.					82%
Dade	G. Raap, M.D., Miami.	1st Friday	8:30 P.M.	Miami City Club	Occasionally.	83%
Duval	Louie Limbaugh, M.D., Jacksonville.	1st Tuesday	8:15 P.M.	Arnold-Edw. Auditorium	No.	100%
Escambia	Herbert D. Snyder, M.D., Pensacola.	1st Tuesday	8:00 P.M.	Board of Health Building	No.	67%
Four Counties..	G. C. Hardie, M.D., Ft. Pierce.					43%
Hillsboro	B. W. Lowry, M.D., Tampa.	1st and 3rd Tuesdays	8:00 P.M.	City Hall	No.	96%
Jackson	R. L. Kennedy, M.D., Malone.	2nd Tuesday	3:00 P.M.	Marianna	No.	96%
Lake	S. C. Colley, M.D., Tavares.	2nd Monday	12:30 P.M.	Biltavern Hotel	Yes.	100%
Lee	H. Quillian Jones, M.D., Ft. Myers.	3rd Friday	7:30 P.M.	Lee Memorial Hospital	No.	93%
Manatee	J. M. Davis, M.D., Bradenton.	1st and 3rd Tues. Oct. to May; 2nd Tues. May to Oct.	7:00 P.M.	Dixie Grande Hotel	Yes.	100%
Marion	J. L. Chalker, M.D., Ocala.	3rd Thursday	12:30 P.M.	Harrington Hotel	Yes.	90%
Monroe	G. R. Plummer, M.D., Key West.	1st Sunday	9:00 P.M.	Varies	Yes.	100%
Orange	M. M. Andrews, M.D., Orlando.	3rd Wednesday	8:30 P.M.	Varies	No.	95%
Palm Beach ...	W. O. Arnold, M.D., W. Palm Beach.	2nd Monday	8:00 P.M.	Monterey Hotel	Yes.	100%
Pasco-Hernando....	T. F. Jackson, M.D., Dade City.	2nd Tuesday	8:00 P.M.	Varies	Yes.	86%
Pinellas	O. O. Feaster, M.D., St. Petersburg.	Every 2nd Friday	8:00 P.M.	Fla. Art School	No.	100%
Polk	Herman Watson, M.D., Lakeland.	2nd Wednesday in Feb., Apr., June, Aug., Oct., Dec.	1:00 P.M.	Lakeland	Yes.	89%
St. Johns	I. M. Hay, M.D., St. Augustine.	3rd Monday	8:30 P.M.	Varies	Yes.	90%
Sarasota	F. Metzger, M.D., Sarasota.	2nd Tuesday	8:30 P.M.	Varies	Occasionally.	100%
Second District County Medical Society	F. Clifton Moor, M.D., Tallahassee.	Quarterly	3:00 P.M.	Varies	Yes.	88%
Sumter	W. E. Mitchell, M.D., Coleman.	2nd Tuesday		Varies	No.	86%
Taylor	R. J. Greene, M.D., Perry.	Last Thursday	12:15 P.M.	Eldorado Cafe	Yes.	78%
Tri-County ...	I. W. Chandler, M.D., Avon Park.		8:00 P.M.	Varies	No.	87%
Volusia	R. L. Miller, M.D., Daytona Beach.	2nd Tuesday	7:30 P.M.	Varies	Yes.	88%
Walton-Okaloosa	D. H. Simmons, M.D., DeFuniak Springs.	3rd Thursday	8:00 P.M.	Varies	Occasionally.	88%

NOTE—(Secretaries: Please submit information to complete the above schedule.)

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